

# SYNCHRO ' SETTE

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THE SUBSCRIPTION MAGAZINE FOR  
THE T/S-1000 and THE ZX-81 MICROCOMPUTERS



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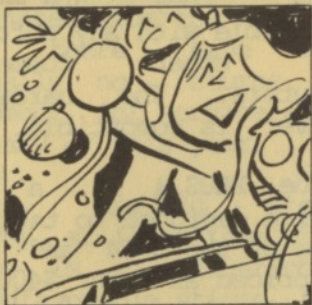
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SEND FOR FREE CATALOG OF  
COMMODORE 64, TS-1000 & TS-2068 PROGRAMS

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# The 1984 Consumer Electronics Show



\* \* \*

Once again, I am pleased to tell you about the new innovations that were on display at this year's Consumer Electronics show at McCormick Place on Chicago's lake front.

Two items, in my opinion, stole the show, as far as computer products go.

## MINDLINK

---

The first is a product called Mind-Link from Atari. This device is a headset the attaches to any Atari computer. The user can control the computer's operation through the use of this device. It finds its

primary use in arcade type games with hands-off operation.

The operation is not done with the thoughts of the operator or mental bio-feedback, but rather with the movement of various muscles of the operator's head.

Mind-Link is supposed to be introduced in August of this year and should be enough of a novelty to show a strong market demand.

## COLOR PRINTER FROM OKIDATA

---

The Okimate 10 is designed to be used with the Atari and Commodore computers. It is a lightweight (7 lbs.) device that will print in 40 to 50 colors at 60 characters per second or graphics characters with 9 by 9 dot matrix at 18 characters per second.

The package comes with a black ribbon, a color ribbon, computer paper, connecting cable, printer handbook, "Learn-to-Print" software package, "Color screen Print" software package and OKIMATE 10

PLUG'n PRINT operating module with optional PLUG'n PRINT modules available.

It is designed to work with most existing software and will print on mailing labels, computer paper, thermal paper and even plastic acetate for overhead transparencies.

The big surprise is the suggested retail price at only \$288.00 - - -

Other interesting devices were chess-playing computers.

Fidelity, the grand-daddy of dedicated chess playing computers, had their top competitor (CSC - Champion Sensory Chess Challenger) on display. This model has a 32K game and is claimed to have a near 1800 USCF rating.

SciSys has a model (205-SUPERSTAR - \$199.00) that claims to solve Mate-In-Eight problems.

Novag's model (831 - Constellation - 199.95) claims to solve Mate-In-Twelve problems with a 16K program and has an ELO rating of 2000 points. This is the model that Grandmaster Jon Speelman lost to in simultaneous play

with 28 other oponents.

## NEW COMMODORE COMPUTERS

---

Commodore introduced 2 new computers and true to form, they are not compatible with any software for other Commodore computers. The hardware, however, is compatible.

The PLUS/4 is a 64K machine designed to take the place of the C-64 and will be priced at under \$400.00. It will come with four software packages built in - File Management, Spreadsheet, Word Processing and Graph Graphics of which the last three are integrated.

The Commodore 16 is a 16K version of the PLUS/4 and is designed to replace the VIC-20 market at under \$150.00.

Also available will be a new color monitor (CM 141), a near letter quality 60 cps dot matrix printer (MPS 802), a letter quality 18 cps daisy wheel printer (DPS 1101) and a new fast disk drive (SFS 481).

This last item would be a welcome accessory to anyone used to using the 1541 drives. The SFS 481 can load a 16K program in 10



seconds.

## COLECO ADAM

---

A representative from Coleco has assured me that all the bugs have been eliminated from the ADAM and that there have been virtually no returns of equipment for service since February of this year.

The trading stock, however, still suffers which to me is an indication of the unfavorable stigma that the ADAM has wrought - a fine example of a good idea gone sour.

Most software vendors were displaying their wares on Commodore 64s, with IBM PCs running a close second. The domination of Apple software in previous shows has changed to show the strong competition from other manufacturers.

Noticeably missing was anything that was computer related involving Timex. This was quite a contrast to the booths (about 3000 square feet) that Timex had last year.

Sinclair had a small booth with a number of their QLs on display (see QL article this issue) and

dispensed literature on the QL and their pocket TV.

The hand-held flat-screen set measures 5 1/2" x 3 1/2" x 1 1/4" and weighs just 12 ounces. The screen measures 1 7/8" across by 1 5/16" down. The only controls for manual adjustment are on/off, volume and channel selection - all others are adjusted internally by a single integrated circuit. Power is supplied by a new-technology Lithium Power Card, as slim as a credit card. This battery can easily be changed by slipping it out and slipping a new one in. Each battery allows 15 hours of viewing. The screen is claimed to be three times as bright as a conventional tube and has pin sharp black and white contrast, yet uses one third to one tenth of the power of a conventional set.

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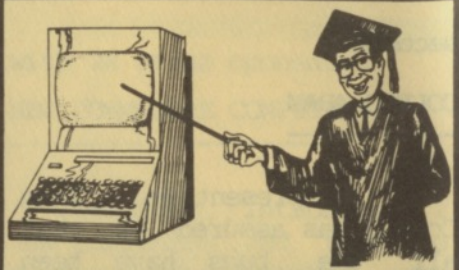
Until the middle of the 19th century, most shoes were made "straight" — they could be worn on either foot.



Vanilla is the extract of fermented and dried pods of several species of orchids.

# *the Computer Tutor*

## TS-2068 ERROR TRAPPING



Good morning Class! In the last tutorial, we discussed a method of utilizing the last two lines on the screen of the TS-2068. When trying to develop a program that could easily self-destruct and render the keyboard inoperative, it would be nice if we could develop a program routine that would do just that.

Let us suppose that we were writing a program with some fancy POKES or M/C routines. In most cases we would have to constantly save up-graded versions on tape before we test them - otherwise, a crash would cause all our entry to be lost.

The ON ERR command is unique and very useful. It can direct the program to a different part of the listing where the error can be easily controlled.

Let us say that our program had the POKÉ 23659,0 in it as discussed in last month's issue. The commands CLS or PRINT AT 23,n (where  $n = 0$  to 31) would cause an un-recoverable crash. If we started our program with:

```
1 ON ERR GOTO 9900
```

the program (in most cases) would be directed to line #9900 whenever an error situation occurs (even if the BREAK keys are pressed). This, however, does not solve the problem completely. The keyboard may still be hung up with all sorts of weird graphics on the screen. What we need to do now is to write a routine starting with line #9900 that will not only restore the critical memory locations with safe numbers but to also locate the line in question where the error occurred. The following routine will accomplish this:



```

9900 POKE 23659,2
9910 ON ERR RESET
9920 CLS
9930 PRINT "ERROR IS IN
      LINE #";PEEK 23736
      + 256 * PEEK 23737
9940 PRINT,, "ERROR #";
      PEEK 23739
9950 PRINT "IN STATEMENT
      #";PEEK 23738

```

To explain what this routine does, 9900 resets the bottom two screen lines to allow the INPUT command to work. Line 9910 disables the error trapping mode so that the keyboard is operative. Line 9920 clears the screen and line 9930 traps the actual line that the error occurred in. Line 9940 gives the report code of the type of error (page 288 manual) and line 9950 states in which command statement or section of that line, the error occurred.

To test this routine, add the following lines:

```

100 PRINT AT 0,0; "WHAT IS
      YOUR NAME?": INPUT N$
110 CLS: POKE 23659,0
120 PRINT AT 22,0:PRINT
      "WELL, "HELLO THERE ";
N$
130 PAUSE 40000: POKE
23659,2
:CLS
140 GOTO 100

```

First save the program and then test it. Try

changing the 23659 POKEs to different line numbers or eliminating them all together. Press the BREAK keys and see what happens.

If CLS is encountered with location 23659 holding a 0, the ON ERR command won't work. The same occurs if PRINT AT 23,n occurs.

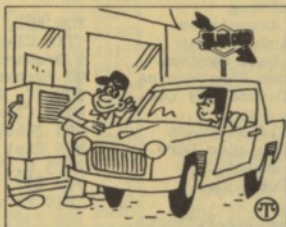
The 2068 has error trapping built in which sometimes doesn't work by itself. Hopefully, this method will help.

Class dismissed!

## FACTS & FIGURES

Octane—a measure of how smoothly a gasoline burns in an engine—was originally measured on a scale of 0 to 100, with 100-octane gasoline having the same anti-knock properties as a fuel comprised of 100 percent of a compound called iso-octane.

\*\*\*



The octane numbers posted on service station pumps are calculated by a formula in which the research octane and the motor octane of a gasoline are averaged.



# Editor Ramblings

This month's  
dedicated to those  
still actively  
the TS computers,  
to SYNTAX for sale  
with this list.

## ZX/TS RELATED COMPANIES STILL ACTIVELY SUPPORTING TIMEX/SINCLAIR COMPUTERS

Organization	Address	State	Zip	Telephone
*A&J MicroDrive	1050 E Duane Ave Suite I, Sunnyvale	CA	94086	408/732-9292
A.F.R. Software	1605 Penn. Ave. # 204, Miami Beach	FL	33139	305/531-6464
*AERCO	POB 18093, Austin	TX	78760	512/331-0719
Aardvark 80	2352 S.Commerce, Walled Lake	MI	48088	313/669-3110
Apropos Technology	1071A Abenida Acaso, Camarillo	CA	93010	805/482-3604
*Audio Vision Systems	1279 N. Normandie, Los Angeles	CA	90027	213/660-5217
Autograph	3584 Leroy St., Ann Arbor	MI	48103	313/769-6859
BASICally Programming	2528 West Olive Dept S, Fullerton	CA	92633	714/738-0666
*Banta Software	8088 Highwood Way, Orangevale	CA	95662	916/722-4895
Barlog Software	401 N. Geyer Rd., Kirkwood	MO	63122	
Baune, Andre	304 Scott, Chateaugay	QU	J6J 4H5	514/691-6933
Biocal Software	167C Wilson St., Petaluma	CA	94952	
Bird Software	2091 Carrick St., Victoria	BC	V8R 2M5	
Brainchild Computer Works	POB 506, Pewaukee	WI	53072	414/691-3903
*Brown, E. Arthur Co.	3404 Pawnee Drive, Alexandria	MN	56308	612/762-8847
*Byte-Back Co.	Rt 3 Box 147 Brodie Rd, Leesville	SC	29070	803/532-5812
Cinagro Software	155 7th St., Rochester	NY	14609	716/654-7614
Compusa Corporation	1101 Bristol Rd., Mountaintop	NJ	07092	201/654-7220
*Computer Continuum	301 16th Ave, San Francisco	CA	94118	415/752-6294
Computerware Publishing	92 Ruskin St., Ottawa	ON	K1Y 4B2	
*Crystal Coast Software	POB 233, Morehead City	NC	28557	
*Curry Computer	5344 W. Banff Lane, Glendale	AZ	85306	602/978-2902
*D. Lipinski Software	2737 Susquehanna Rd., Roslyn	PA	19001	215/572-6812
DHS	POB 681, Orland	CA	95963	916/865-5188
Delphic Enterprises	POB 72205, Corpus Christi	TX	78472	512/854-5873
Discount Software	POB 2035, New York	NY	10185	212/486-0980
Doc's Software	4339 Keysville Ave., Spring Hill	FL	33526	
Down East Computers	POB 3096, Greenville	NC	27834	919/752-7817
*E-Z Key	Suite 75, 711 S. Artery, Quincy	MA	02169	617/773-1187
ENER-Z Company	POB 635, Fort Washington	PA	19034	215/757-0284
*EZRA Group II	POB 5222, San Diego	CA	92105	
*Executive Workshop	7420 SE Woodstock, Portland	OR	97206	503/771-8564
*Fingerle, Robert	39639 Embarcadero, Fremont	CA	94538	
*G. Russell Electronics	RD 1 Box 539-S, Centre Hall	PA	16828	814/364-1325
*Games to Learn By	2 South St Box 575, Williamsburg	MA	01096	413/268-7505
Ganhart Earthings	115 N. Rocky River Dr., Berea	OH	44017	
General Systems Consulting	2312 Rolling Rock Dr., Conley	GA	30027	404/243-7369
*Gesang Associates	POB 452, Randallstown	MD	21133	301/922-0767
Geschwind, Herman	1714 Clarendon Dr., Greensboro	NC	27410	
Gibson Data Systems	9 Orchard Dr., Durham	NH	03824	
Gladstone Electronics	90 Furmann Blvd., Buffalo	NY	14203	716/874-5510
*Group Technology Ltd.	POB 87, Check	VA	24072	703/651-3153
Harmon, Len	4909 Clearlake Dr., Metairie	LA	70002	
Hawg Wild Software	POB 7668, Little Rock	AR	72217	501/227-7817
*Heath Computer Serv.	950 East 52 South, Greentown	IN	46936	317/628-3130
*Heller Paper Co.	2123 E. 38th St., Brooklyn	NY	11234	
Hobby Robot Co.	POB 887, Hazlehurst	GA	31539	912/375-7821
Hunter	1630 Forest Hills Dr., Okemos	MI	48864	
Huron Valley Research	POB 732, Highland	MI	48031	
Independence Research	POB 1497, Orem	UT	84057	
Integrated Data Systems	11 Brighton Ave, Toronto	ON	M4M 1P3	
JK Audio	POB 3295, Escondido	CA	92025	619/741-5132
*JM Software	1852 Appleford St., Gloucester	ON	K1J 6T4	613/746-7869
*JRC Software	POB 448, Scottsburg	IN	47170	812/752-6071
*K-Soft	845 Wellner, Naperville	IL	60540	312/961-1250
K2 Electronic Design	3990 Varsity Drive, Ann Arbor	MI	48104	313/973-6266
Kimbrough, B. F.	723 Roselle Ave. Floor 2, Akron	OH	44307	
*Knighed Computers	707 Highland St., Fulton	NY	13069	315/593-8219



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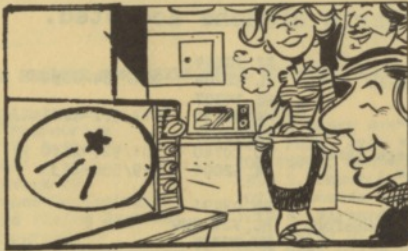
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Konder, Arnold	2 Jane St., New York	NY 10014	
*Kuhn, John	1707 King St., Jacksonville	FL 32204	904/384-8054
*Lake, Virginia T.	POB 351, Hockessin	DE 19707	
Luxtron Inc	241 Winter St, Haverhill	MA 01830	617/372-5211
*Magic World Software	POB 1184, Olympia	WA 98507	
*Maryland Book Exchange	4500 College Ave., College Park	MD 20740	301/927-2510
Mech. Design Analysis	1235 Madera St., Dubuque	IA 52001	319/556-2133
Cons.			
Microsync Services	162R Marlboro St, Keene	NH 03431	
Mill Research	32749 Avalon Crescent, Abbotsford	BC V2T 3W9	
Monixware	PO Box 318, NFLD	NJ 07435	
Orange Coast Software	POB 951, Midway City	CA 92655	
Corp			
People's Computer	2S 700 Cerny, Warrenville	IL 60555	312/393-1507
*Pheonix Enterprises	1780 N. Dupont Hwy No. 17, Dover	DE 19901	302/734-0179
*Pyramid Electronics	2174 Gulf Gate Dr., Sarasota	FL 33581	813/922-9574
Quicksilva	426 West Nakoma, San Antonio	TX 78216	512/340-3684
RAM Products	4736 N. Wilwaukee Ave., Chicago	IL 60630	
*RIST Computers	POB 499 Ft Hamilton Sta, Brooklyn	NY 11209	212/259-4934
ROMpak	8206 Blackburn Ave, Los Angeles	CA 90048	
*Ramex International	48945 Van Dyke, Utica	MI 48087	313/463-1795
Robotec	59 C St Ampoint Ind Park,	OH 43551	419/666-2410
	Perrysburg		
*S & S Company	388 W. Lake St., Addison	IL 60101	312/628-8955
Second Base	700 Lexington Ave, Altoona	PA 16601	814/942-1871
Seymour, Paul F., P.E.	POB 11, Hamburg	NJ 07419	201/827-9151
*Sharp's	127 Nine Mile Rd., Sandston	VA 23150	804/737-4895
Sidorski, Edward	POB 842, Susquehanna	PA 18847	
Simulusion	POB 2382, La Jolla	CA 92038	619/454-1023
Sinclair Research	50 Staniford St., Boston	MA 02114	617/742-4826
*Sinware	POB 8032, Santa Fe	NM 87504	505/988-2096
Siriusware	6 Turning Mill Rd., Lexington	MA 02173	
Skinner Electronic Ent.	POB 787, Fallbrook	CA 92028	619/728-6904
*SmallTyme Software	519 Independence Ave. SE,	DC 20003	202/543-5891
	Washington		
Smith, Kendric	927 Mears Ct., Stanford	CA 94305	
*Soft-Way	3308 Midway Dr. #124, San Diego	CA 92110	
*Softsync	14 E. 34th St, New York	NY 10016	212/685-2080
Software Solutions	927 Mears Ct., Stanford	CA 94305	415/493-7210
Speedware	POB 19138, Austin	TX 78760	512/447-8087
Starburst Software	2214 Horine Rd., Festus	MO 63028	
Stock Market Software	1556 Halford Ave. #236, Santa Clara	CA 95051	
*Story Software	3838 S 97th St, Milwaukee	WI 53228	
*Stueber, Mark	127 9-Mile Rd., Sandston	VA 23150	804/737-4895
*Sunset Electronics	2254 Taraval, San Francisco	CA 94116	415/665-8330
SyncWare	POB 5177, El Monte	CA 91734	213/448-4113
TAG Software	POB 688, Nauvau	CT 06770	
*TEJ Computer Products	859 N. Virgil Ave., Los Angeles	CA 90029	213/665-5111
*TS Training Info Serv.	POB 15214, Red Bank	TN 37415	615/877-6328
Tidwell, Vernon	1303 Whitehead St., Key West	FL 33040	305/296-8657
Timensa Software	3707 Downey Dale Dr., Randallstown	MD 21133	301/655-6195
UAS	POB 612, Haddenfield	NJ 08033	609/667-0031
Val Corporation	1621 N. Wakefield St., Arlington	VA 22207	703/243-0545
Wasserman, Harvey	4604 Apple Tree Dr., Alexandria	VA 22310	703/971-7593
*White Lightning	Rte 4 Box 2240, Lufkin	TX 75901	409/632-3757
White, Al	308 18 1/2 Ave. SW, Rochester	MN 55902	507/282-2416
Wizard Works	POB 65, Walkerville	MI 49459	
*Woods, Tom	POB 64, Jefferson	NH 03583	
York 10 Computerware	9525 Vassar Ave, Chatsworth	CA 91311	213/710-1430
ZX-Panding, Ltd.	POB 25, Newton	NC 28658	704/464-2742
*Zebra Systems Inc.	78-06 Jamaica Ave, Woodhaven	NY 11421	212/296-2385

\*Indicates a company that provides support for the TS2068



## Computer Graphics in TV Advertising



Although Timex may not be selling computer products anymore, computers still play a large part in their marketing plans.

Computer graphics, which have been introduced to the consumer in such movies as TRON and LOOKER, are now making their way into TV commercials. The last visual punch that Timex had on TV was with the theme "Takes a licking and keeps on ticking".

You probably remember the one where the timepiece is strapped to the propeller of an outboard motor and then submersed in water with the motor being turned on. The watch was virtually disintegrated.

This didn't seem to hurt the success of the marketing future of the product as Timex became an industry leader in inexpensive accurate timepieces.

Lately, watch advertising on TV has not been as successful as in the past. Timex has developed an advertising campaign that uses computer designed graphics to produce special effects that they hope will turn this trend around.

The small ticking watches are made to appear gargantuan. Ballerinas dance across their faces, joggers run on them, they act as elevator doors or as a boat dock.

Timex is not the only one to use computer generated or aided graphics in TV commercials. TransAmerica Corp. depicts a giant King Kong type gorilla climbing the TransAmerica building. American Motors makes the Renault Encore appear to stretch like elastic as it turns corners. MCI shows the nose of a Boeing 747 sticking out on Wall street.

The computer can actually design all or parts of these visual effects. Computer drawings may be overlaid with actual photographic footage to produce the



# Quantum Leap



## THE SINCLAIR QL AT THE CES SHOW

- 32 Bit Processor
- 128K Memory
- Two Built-In Microdrives
- High Resolution Color
- Includes Software:
  - Word Processing
  - Database management
  - Spreadsheet
  - Graphics

These are some of the things most of us have already learned about the QL. Here are some things I found out at the show that I didn't know:

SuperBASIC, the internal language of the QL, has three advantages over conventional BASICs; it's fully procedure structured; it's extendable; and it's execution speed is independent of size. This means a programmer can write code in clearly defined

blocks, new procedures can be added that will work exactly the same way as command procedures in ROM that the programmer is familiar with and programs won't execute slower as they get larger.

Data transfer with the Microdrive system is actually a little faster than floppy disk and maintains an index so that you can see what is on any cartridge. Each cartridge is about the size of a matchbook and the QL can accomodate six more drives for a total of eight.

The QL QUILL is a powerful word processor that is interactive with the other three supplies software packages and incorporates automatic word wrap and paragraph indentation on the screen as text is entered. Boldface, superscript, subscript, underline, hyphenate and overwrite are a few of the features of QUILL.

ARCHIVE is a database management program allowing up to 256 fields, ABUCUS is a spreadsheet program with 16,384 cells and EASEL is a graphics program that can create extensive charts and graphs.

QLAN is a local

# Olympic Theme



## OLYMPIAD XXIII

With the up-coming Olympics in Los Angeles, here is a sound/graphics program written for the TS-2068 in that spirit:

```
10 REM ** OLYMPIAD XXIII **
   written by Gene Buza
20 CLS: LET A=0
30 FOR I=1 TO 2
40 CIRCLE 75,100,20+I
50 CIRCLE 100,75,20+I
60 CIRCLE 125,100,20+I
70 CIRCLE 150,75,20+I
80 CIRCLE 175,100,20+I
90 NEXT I
100 FOR N=0 TO 31
110 PRINT AT 0,N;CHR$ 143;
    AT 21,N;CHR$ 143
120 IF N>21 THEN GO TO 140
130 PRINT AT N,0;CHR$ 143;
    AT N,21;CHR$ 143
140 NEXT N
150 DIM A$(30)
160 PRINT AT 2,8;"O L Y M P
    I A D";AT 4,11;"X X I I
    I"
170 POKE USR "a",BIN
```

```
001111100
180 POKE USR "a"+1,BIN
01000010
190 POKE USR "a"+2,BIN
10100101
200 POKE USR "a"+3,BIN
10000001
210 POKE USR "a"+4,BIN
11000011
220 POKE USR "a"+5,BIN
10111101
230 POKE USR "a"+6,BIN
01000010
240 POKE USR "a"+7,BIN
001111100
900 LET B=4
950 FOR I=1 TO 2
1000 FOR N=1 TO 15
1010 PRINT AT 19,A+10;" "
    :READ A:READ C
1020 GOSUB 2000
1030 BEEP C,A: PAUSE B
1040 NEXT N: IF I=2 THEN
    GO TO 1100
1050 RESTORE
1060 PAUSE 10
1070 NEXT I
1100 PAUSE 10
1200 FOR I=N TO 28
1210 PRINT AT 19,A+10;
    " ":READ A: READ C
1220 GOSUB 2000
1230 BEEP C,A: PAUSE B
1240 NEXT I
1250 PAUSE 10
1260 RESTORE
1270 FOR N=1 TO 13
1280 PRINT AT 19,A+10;
    " ":READ A: READ C
1290 GOSUB 2000
1300 BEEP C,A: PAUSE B
1310 NEXT N: LET A=3:
    GOSUB 2000
1320 BEEP .1,A: PAUSE B
1330 PRINT AT 19,A+10;" ":
```



## Letters To The Editor



difficulty. I have lost money with a few vendors that have gone out of business. At least you people have fulfilled your obligations. Just as I think Synchro-Sette has gone under, I receive another two issues in the mail. I have enjoyed them all and will be sorry when there won't be any more.

J. Solderholm - Butte MT

Dear Ed,

I was wondering if you are offering a version of an up-load program to update from the TS-1000/1500 to the TS-2068?

Thanks for the many hours of enjoyment you have given to the users of the Timex-Sinclair software.

C. Meyer - Baltimore MD

Dear Charles,

I am sorry to say we are not. We have used the one from E-Z KEY mentioned in previous issues with good success.

Dear Ed,

I guess interest in the TS products has reached a low ebb. You are not the only one experiencing

Dear Jerry,

Thanks for the tribute. Synchro-Sette has fallen on hard times as have many of our peers. The issues come late but they will all get to you. We apologize and hope you will bear with us.

Dear Ed,

Is there a simple formula for figuring out the "magic number" for the winning major league baseball team that will determine the combination of wins by the first place team and losses by a team not in first place that will bring the first place team the division title?

T. Salvatore - Chicago, IL

Yeah, Tom - the Cubs are

(cont. on page 15)

(QL CONT.)

networking capability that allows up to 64 QLs to be linked together so that files and data can be shared between machines. Data travels through this network at the incredible speed of 100K baud.

Yes, it does have a ROM cartridge (up to 32K) slot and joystick ports.

The computer operates off a power supply that produces 9v DC at 1.8 amps and 15.6v AC at .2 amps for a total of 19 watts. It measures 5 3/8" x 1 3/4" x 18 3/4", weighs 3 lbs. and comes with four blank cartridges. One megabyte of non-segmented address space is available for expansion.

A Winchester hard disk interface is in the works and a parallel printer interface is available as an option.

QLUB is the QL Users Bureau and is open to all QL users. Annual dues are \$30.00 and you will receive free updates for each of the four programs supplied with the QL along with 6 bi-monthly newsletters.

For under \$500, it sounds like a winner!

(OLYMPIC CONT.)

```
GOSUB 2000
1340 BEEP .8,3: PAUSE B
1350 PRINT AT 19,A+10;" "
1360 LET A=0
1370 RESTORE
1900 PAUSE 200
1910 GOTO 950
2000 LET B$=A$
2010 LET B$(A+10)=CHR$
      (144)
2020 PRINT AT 19,1;B$
2030 RETURN
3000 DATA 10,.8,3,.8,5,
      .3,7,.1,8,.1,7,.3,
      3,.4,5,.3,7,.1,8,.1,7,
      .3,3,.3,5,.6,-2,.8,5,
      .8,10,.6,8,.1,7,.3,5,
      .3,3,.3,2,.2,0,.8,12,
      .4,10,.1,8,.2,7,.2,5,
      .6
```

## WATER facts & figures

One of the greatest bargains in history is drinking water. On average, Americans pay \$1.03 for 1,000 gallons delivered 24 hours a day to their homes and places of business.

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A healthy family of four only needs to consume about 700 gallons a year, which is a little more than two quarts a day per person, reports the American Water Works Association. The typical American family, however, uses more than 90,000 gallons a year.



desired effect or the computer may be used just to calculate the proper distances needed between objects to be photographed to produce the desired effect.

The result is a visual punch that psychologically grabs us. To the consumer's jaded mind, a message is given that says "Hey, this is physically impossible or highly improbable!".

We in turn, unconsciously direct our attention to the ad because of the impossibility or improbability.

The advertisers (including Timex) hope this will be enough to create a sales increase - Ed.

really doing great and the whole area is excited. Harry Carry says people not only in the U.S. are rooting for them but all over the world, due to cable television. The program is as follows:

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10 CLS
20 PRINT "HOW MANY WINS DOES
THE
    TEAM IN FIRST PLACE
HAVE?"
30 INPUT W
40 PRINT "HOW MANY LOSSES
DOES"
    THE OTHER TEAM HAVE?"
50 INPUT L
60 PRINT "THE MAGIC NUMBER
IS "
    ;163-W-L
```

When this number reaches zero or a minus number, it is impossible for the other team to even tie for the lead - Ed.



Alfred Nobel invented not only dynamite, but plywood.



The gorilla was discovered by Paul Belloni Du Chaillu, an African traveler and renowned storyteller of the 1800s.

